by employing the heating of a metal specimen directly by means of a commercially pure current flowing through it. The line diagram of the device used is shown (Fig. 1). Special control experiments showed that inside of a 10 min period of treatment, a practically stable temperature distribution is established along the length of the specimen. As an example, the authors provide a table (Table 1) for the values of the modulus of normal elasticity E, the shear modulus G, and Poisson coefficient δ for molybdenum at different temperatures. The last column in the table gives the modulus of elasticity available in the literature (M. G. Lozinskiy. Struktura i svoystva metallov i splavov pri vysokikh temperaturakh. M., Mashgiz, 1963). Orig. art. has: 1 figure and 1 table.

SUB CODE: 11,20 / SUBM DATE: 10Apr65 / ORIG REF: 002

L 34373-66

ACC NR: AP6008001

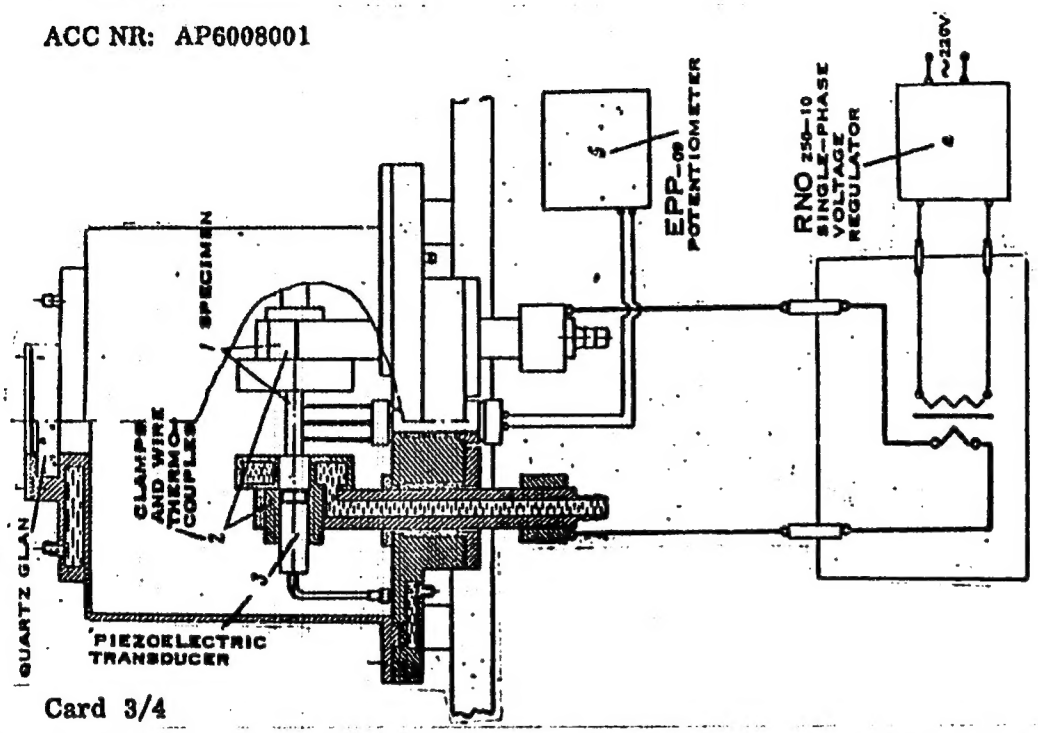

Fig. 1. Device for measuring the moduli of elasticity of metals.

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L 34373-66

ACC NR: AP6008001

TABLE 1. Coefficients for molybdenum.

T°K	E, кгс/мм²	G, кгс/мм²	σ	E, кгс/мм² [2]
300	33 200	12 700	0.31	33 250
500	32 000	12 200	0.31	32 080
700	30 800	11 700	0.315	31 650
900	30 100	11 400	0.315	30 500
1100	28 550	10 820	0.318	29 000
1300	27 700	10 500	0.32	28 100
1500	26 500	10 000	0.32	27 000
1700	25 800	9750	0.325	—
1900	25 000	9400	0.327	—
2100	22 900	8600	0.33	—
2300	22 000	8250	0.33	—
2500	20 000	7500	0.335	—
2700	17 550	6550	0.34	—

Card 4/4

KALUGIN, B. F.

Kalugin, B. F.; T. S. Kuzina; and A. A. Dmitriyev. Methods of Titanium-base Alloy Sheet Rolling p.56

Pressure Treatment of Alloys; Collection of Articles, Moscow, Oborongiz, 1958, 141pp.

KALUGIN, B.F.

Experimental study of the process of transporting solid particles in an air flow. Inzh.-fiz. zhur. 4 no.4:120-122 Ap '61.
(MIRA 14:5)

1. Politekhnicheskiy institut, g. Tomsk.
(Pipeline transportation of solids)

KALUGIN, B.F.

Loss of head due to the impingement of particles against the walls in pneumatic transportation through horizontal pipes. Inzh.fiz. zhur. 4 no.7:40-46 Jl '61. (MIRA 14:8)

1. Politekhnicheskiy institut, Tomsk.
(Pneumatic-tube transportation)

KALUGIN, B.F.

Calculation of relative velocities of particles during pneumatic transportation along horizontal pipes. Inzh.-fiz.zhur. no.5:82-88 My '62. (MIRA 15:7)

1. Politekhnicheskiy institut imeni S.M. Kirova, Tomsk.
(Pneumatic conveying)

KALUGIN, B. N.

8(3,5) PHASE I BOOK EXPLOITATION SOV/3185

Moscow. Aviatsionnyy institut

Nekotoryye voprosy teorii raboty aviatsionnykh elektricheskikh mashin; sbornik statey (Some Problems in the Theory of Operation of Aircraft Electric Machines; Collection of Articles) Moscow, Oborongiz, 1959. 125 p. (Series: Its: Trudy, vyp. 110) 3,150 copies printed.

Ed.: A. I. Bertinov, Professor; Ed. of Publishing House: K. I. Grigorash; Tech. Ed.: V. P. Rozhin; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineering and technical workers and students taking advanced courses in electrical machine construction.

COVERAGE: The book contains several articles on the theory and design of special electrical machines, such as: three-winding, bilateral feed transformers (phase discriminator), induction motors with copper-plated ferromagnetic rotor, shielded induction motors with copper-plated ferromagnetic rotor and general purpose electrical machines for aircraft. In addition, systems for the stabilization of the frequency of aircraft inverted synchronous converters and their protection are studied. A purportedly [illegible] way of speed regulation of induction motors is also examined. References are given after each article.

AVAILABLE: Library of Congress

Card 5/5

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B012/B054

AUTHORS: Nemirovskiy, B. M., Senior Engineer, and Kalugin, B. N., Senior Engineer

TITLE: Emergency Modulator of a Television Transmitter

PERIODICAL: Vestnik svyazi, 1960, No. 2 (239), pp. 29-30

TEXT: The emergency modulator for the standard TV transmitter, installed at the Minskiy teletsentr (Minsk Television Center) with a power of 5 kw at peak operation, was constructed in the form of a support with detachable blocks. This modulator, which is 2010 mm high, 760 mm long, and 960 mm deep, is half the size of the standard modulator. The emergency modulator is, like the working modulator, a three-stage broad-band amplifier with a correction in the low and high-frequency range. The blocks of the first, second, and third stage are, analogous to those of the working modulator, and are therefore exchangeable with the latter. Essential characteristics of the emergency modulator are a well-planned distribution of the blocks of the third stage and the selenium rectifier of the modulator which made it possible to pass over from forced to natural

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Emergency Modulator of a Television Transmitter

cooling. In contrast to the working modulator which receives the displacement voltage from the TV transmitter, the emergency modulator has its own 150 v bias rectifier with full-wave circuit which makes the feeding of the emergency modulator independent of the TV transmitter. In contrast to the standard modulator with two large outside chokes, the emergency modulator is equipped with small chokes which are located in the support. In the course of an experiment, the separating transformer was omitted, while the transformer core was earthed by the non-earthed bias rectifier. It appeared that the frequency characteristic of the TV transmitter with modulator remained unchanged. Omission of the separating transformer, however, led to a further reduction of the support dimensions. In tuning, it proved to be difficult to tune the output cable of the emergency modulator to the fifth TV transmitter stage to be modulated. This disadvantage was eliminated by means of an RC circuit chosen by way of experiment and shown in Fig. 4. The frequency characteristic of the modulator was considerably improved in various places by shortening the output cable as much as possible and by careful earthing of the cable shield. A fatigue test of the emergency modulator described proved its absolute utility in operation.

RUBANIK, V.G.; KORNEYCHIK, Zh.N.; MEL'NIK, A.F.; SOLONINOVA, I.N.; ZHERONKINA, T.A.; KALUGIN, P.S.; TKACHENKO, V.S.; BESSCHETNOV, P.P.; PROTASOV, A.N.; PARAVYAN, A.V., doktor biol. nauk, otv. red.

[List of trees and shrubs recommended for landscaping in populated places of Kazakhstan] Spisok derev'ev i kustarnikov, rekomenduemykh dlia ozeleneniia naselennykh punktov Kazakhstana. Alma-Ata, Izd-vo AN KazSSR, 1963. 85 p.
(MIRA 17:3)

1. Akademiya nauk Kazakhskoy SSR. Institut botaniki. 2. Glavnoye upravleniya lesnogo khozyaystva i okhrany lesa Soveta Ministrov Kazakhskoy SSR (for Tkachenko). 3. Kazakhskiy sel'skokhozyaystvennyy institut (for Besschetnov, Protasov).

KALUGIN, E.S.; KNORRE, G.M.

Results of the introduction of trees and shrubs in the Karaganda Botanical Garden. Trudy Inst.bot.AN Kazakh.SSR 14:3-49 '62. (MIRA 16:4)

(Karaganda--Woody plants)

KALUGIN, E.S.

Conifers suitable for the landscaping of cities in the Karaganda industrial region. Trudy Inst.bot.AN Kazakh.SSR 17:3-17 '63.
(MIRA 17:3)

TIRASPOL'SKIY, Iosif Grigor'yevich; KALUGIN, Igor' Vladimirovich; CHERNYAYEV, P.N., red.; DIZHUR, I.M., red. izd-va; LAVRENOVA, N.B., tekhn. red.

[Efficiency experts and innovators at the No.1 Odessa Ship Repairing Plant] Ratsionalizatory i novatory Odesskogo sudoremontnogo zavoda no.1. Moskva, Izd-vo "Morskoi transport," 1958. 59 p.
(Ships--Maintenance and repair) (MIRA 11:7)

KALUGIN, K.

PATON, Ye.O., geroy sotsialisticheskogo truda; BARZILOVICH, L., redaktor; KALUGIN, K., redaktor; KADASHEVICH, O., tekhnicheskiy redaktor.

[Memoirs; as told to IUrii Buriakovskii] Vospominaniia; literaturnaia zapis' IUriia Buriakovskogo. Kyiv, Derzh. vyd-vo khudozh. lit-ry, 1955. 321 p. (MLRA 8:10)
(Paton, Evgenii Oskarovich, 1870-1953)

KALUGIN, Kh. I.

Principal data on the Permian and Mesozoic stratigraphy of the western part of the Okhotsk-Kolyma water parting area [with summary in English]. Sov. geol. 2 no.2:48-67 F '59. (MIRA 12:5)

1. Verkhne-Kolymskoye geologorazvedochnoye upravleniye.
(Kolyma Valley--Geology, Stratigraphic)

GITLIN, N.N., kand.tekhn.nauk; KALUGIN, K.P.

Selecting an efficient design of the gasoline booster pump for motor vehicles. Avt.prom. 28 no.1:21-23 Ja '62. (MIRA 15:2)

1. TSentral'nyy nauchno-issledovatel'skiy i konstruktorskiy institut toplivnoy apparatury avtotraktornykh i statsionarnykh dvigateley.

(Fuel pumps)

SOV/112-59-3-5331

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 148 (USSR)

AUTHOR: Shtukkenberg, Yu. M., Kalugin, K. S., and Bobkov, A. I.

TITLE: Electric Precipitator for Determining Concentration of Active Aerosols (Elektrofil'tr dlya opredeleniya kontsentratsii aktivnykh aerozoley)

PERIODICAL: V sb.: Issled. v obl. doziметrii ioniziruyushchikh izlucheniy. M., AN SSSR, 1957, pp 132-153

ABSTRACT: Measurement of active-aerosol concentration in air is conventionally performed by pumping air through a paper filter and by subsequently determining its activity. The fundamental disadvantages of this method are: (1) low speed of pumping resulting in a long measurement time (particularly with small concentrations when this time is as long as several hours); (2) self-absorption of the radiation in paper; (3) low accuracy of measurement due to the fact that the filter traps different-size particles differently. Design of an electric precipitator is described which is based on the corona discharge and

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Electric Precipitator for Determining Concentration of Active Aerosols SOV/112-59-3-5331

which is free from the above disadvantages. Aerosols charged in the corona region are deposited on a detachable target which has a reverse-sign potential; then, the target activity is measured. A simplified theory of such a precipitator is examined. Experiments have shown that various sizes of aerosols are effectively deposited on the precipitator target; the efficiency, i.e., the ratio of the number of deposited aerosols to the total number of aerosols entering the precipitator, amounts to a few dozens per cent and little depends on the aerosol size.

L.V.M.

Card 2/2

KALUGIN, K.S.

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 303 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Frolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, G.L. (Secretary); Tech. Ed.: Novichkov, N.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

TABLE OF CONTENTS:

PART I. PRODUCTION OF ISOTOPES

This report is a general survey of production methods, apparatus, raw materials, applications, investigations and future prospects for radio isotopes in the Soviet Union.

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General description and electric circuit diagrams are given for a pocket-sized radiometer intended for approximate determination of gamma- and hard beta-ray intensities above 1 Mev. Time lapse after onset of radiation registration serves as a parameter for the determination of intensity up to 1000 μr/hr with an accuracy of ± 20 percent. Working principle, components and electric circuit diagram are given for a pocket-size dosimeter capable of detecting approximate intensities of gamma- and beta-radiation from 0.1 to 5000 μr/sec and

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Kalugin, K.S.

PHASE I BOOK EXPLOITATION SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): E.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labaznov; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000620210014-5"

SOV/120-59-4-16/50

AUTHORS: Belov, I. P., Kalugin, K. S., Keirim-Markus, I. B., Nikiforov, V. I., Poroshina, M. S.

TITLE: The ILK-3 Individual Luminescence Dosimeter

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, pp 74-80 (USSR)

ABSTRACT: The apparatus is an improved form of one described in 1955 (Ref 1 - Session of the USSR Academy of Sciences on the Peaceful Uses of Atomic Energy - available in English). The main new features are that an improved phosphor is used, and that a very much better recording circuit has been developed. The phosphor is not described in detail, but is a $CaSO_4$-Mn one.

It is not sensitive to daylight, and so the badges can be handled under normal lighting. Fig 5 shows how the readings decay with time after a single dose at various temperatures (given on the curves, top half of the figure; the abscissa is in days). The second half of this figure shows the effects of changing the temperature. Fig 6 shows the dose response curves (I is for X-rays; II is for ^{60}Co γ-rays; the abscissa scales are in kr). The two parts of Fig 7 show the hardness response; curve 0 is for unfiltered radiation, while curves 1 to 3 indicate the thicknesses of the Cd filters (in mm);

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The ILK-3 Individual Luminescence Dosimeter

the meanings of the rest of the caption are clear. (The abscissa is in MeV). Fig 4 shows the electrical circuit. The apparatus discharges the phosphor by means of a flash of infrared light; the resulting light flash is recorded by the photomultiplier and is integrated by the circuits to give the dose received. Fig 2 shows the shutter system used to insert the badges into the photometer head; Fig 3 shows that head. The paper contains 7 figures and 6 references, all of which are Soviet.

SUBMITTED: June 3, 1958.

SHTUKKENBERG, Yu. M.; KALUGIN, K. S.; IROBOT, V. I.

"Facilities with Water Shielding for Measuring External Radiation from Human Subjects."

paper presented at Symp on Assessment of Radioactive Body Burdens in Man, Heidelberg, W. Germany, 11-16 May 64.

DROBOT, V.I.; KALUGIN, K.S.; SHTUKKENBERG, Yu.M.

Device for the measurement of external human radiation. Med. rad. 8 no.10:77-82 O '63. (MIRA 17:6)

FORTUSHNYY, Vladimir Anisimovich; NOVIKOV, Vladimir Mitrofanovich; KALUGIN, Leonid Konstantinovich; GRECHKO, G.S.[Hrechko,H.S.], red.

[Prophylaxis of diseases in young farm animals; aid to veterinary specialists and stockbreeders] Profilaktyka khvorob molodniaka sil's'kohospodars'kykh tvaryn; na dopomohu veterynarnym spetsialistam i pratsivnykam tvarynnytstva. Kharkiv, Kharkivs'ke knyzhkove vyd-vo, 1964. 74 p. (MIRA 18:2)

KALUGIN, L. V.

PRUSOV, Vsevolod Vasil'yevich; SHESTOPALOV, Konstantin Sergeyevich; KALUGIN, L.V., redaktor; MAL'KOVA, N.V., tekhnicheskiy redaktor

[Maintenance and repair of road machinery under field conditions] Tekhnicheskoe obsluzhivanie i remont dorozhnykh mashin v polevykh usloviiakh. Moskva, Nauchno-tekhn.izd-vo avtotransportnoi lit-ry, 1955. 78 p. (MLRA 9:2)
(Road machinery)

KALUGIN, L.V., inzhener; PRUSOV, V.V., inzhener.

"Roadbuilding machinery." Reviewed by L.V. Kalugin, V.V. Prusov. Mekh.stroi. 13 no.5:32-33 My '56. (MLRA 9:8)
(Road machinery)

KALUGIN, M.

USSR/Cultivated Plants - General Problems. M-1

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91578

Author : Kalugin, M.

Inst : Slavgorodskaya Selection Station.

Title : Crop Rotation in the Agricultural Steppe Zones of Altavskiy Kray.

Orig Pub : S. kh. Sibiti, 1957, No 3, 15-21

Abstract : Data from the Slavgorodskaay Selection Station in the arid areas of Altavskiy Kray. Agrotechniques used in sowing perennial grasses in crop rotation and the effectiveness of utilizing them are described. Also presented are schemes of crop rotation in 6- 7- 8- 9-field with fallow plowing without perennial grass but with projecting grass wedges, which occupy either one field or a part of it. The utilization of a layer of perennial grass is

Card 1/2

KALUGIN, M.

Consider vital and urgent questions. Sov. profsoiuzy 4 no.7: 56-57 Jl '56. (MLRA 9:10)

1. Predsedatel' Groznenskogo obkoma profsoyuza rabochikh neftyanoy promyshlennosti.
(Groznyy Province--Petroleum industry)

11(0), 14(0)

SOV/92-59-1-34/36

AUTHOR: Kalugin, M.I., President of the Chechen-Ingush Committee of the Trade Union of Petroleum and Chemical Industry Workers

TITLE: Oilmen of the Chechen-Ingush Republic Report (Neftyaniki Checheno-Ingushetii raportuyut)

PERIODICAL: Neftyanik, 1959, Nr 1, p 35 (USSR)

ABSTRACT: The convocation of the Twenty First Extraordinary Congress of the Communist Party of the USSR, and public discussions of principles laid down by N.S. Khrushchev in his report to the Congress stimulated political and professional activities of the working class. Oilmen and chemists of the Chechen-Ingush ASSR joined Soviet people in its effort to overfulfill the production plan set by the Soviet Government. As a result, the 10 month production plan of the Groznyy Lubricating Oil Plant was implemented by November 7th. In addition, a number of oilfields also completed their production plans ahead of time. Workmen of the chemical industry, recently created in the Chechen-Ingush ASSR, are successfully discharging their obligation to develop production of phenol and acetone from natural gas.

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Refinery technical personnel was the first to join the accelerated production campaign initiated by the young workers of Moscow. This example was followed by chemists and machine builders. Intensive work is being done in the Chechen-Ingush Republic for the purpose of shortening the working day and of revising the pay scale of workmen. The necessity of boosting petroleum production and modernizing the refinery processing units, which was emphasized in N.S. Khrushchev's report, is regarded by the Chechen-Ingush oilmen as their own task. Within a few years they have to solve serious problems connected with the introduction of new techniques, the development of chemical production and of exploratory drilling, and the utilization of gas.

ASSOCIATION: Chechen-Ingush obkom profsoyuza rabochikh neftyanoy i khimicheskoy promyshlennosti (The Chechen-Ingush Committee of the Trade Union of the Petroleum and Chemical Industry Workers)

KALUGIN, M.I.

Tilling soils with flat-cutting implements in the Kulunda Steppe. Zemledelie 24 no.7:70-73 Jl '63. (MIRA 15:12)

1. Slavgorodskaya selektsionno-opytnaya stantsiya.
(Kulunda Steppe—Tillage)

KALUGIN, M.I.

Spring tillage of eroded soils. Zemledelie 26 no.5:82-83 My '64. (MIRA 17:6)

1. Slavgorodskaya selektsionno-opytnaya stantsiya.

KALUGIN, M.I., agronom

"Cultivation practices in growing large buckwheat crops" by I.N.Elagin. Reviewed by M.I.Kalugin. Zemledelie 24 no.11: 95-96 N '62. (MIRA 16:1)

(Buckwheat) (Elagin, I.N.)

KALUGIN, M.P., inzhener-issledovatel'; KASHTAN'YER, L.N., inzhener-issledovatel'; LAPAYEVA, Ye.V., inzhener-issledovatel'

Practice in unifying the technical, industrial and financial plan. Trudy Ural. politekh. inst. no.120:50-57 '61. (MIRA 16:6)
(Sverdlovsk Province--Industrial management)

KALUGIN, M.V.; CHISTYAKOV, A.T., inzh., nauchnyy red.; CHERNYAKHOVSKIY, M.M., red.izd-va; RUDAKOVA, N.I., tekhn.red.

[Instructions on safety techniques for acetylene generator operators; using stationary equipment] Pamiatka po tekhnike bezopasnosti dlia gazogeneratorshchika (na statsionarnykh atsetilenovykh ustanovkakh). Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 11 p. (MIRA 12:8)
(Acetylene generators)

KALUGIN, N.I.

Teaching reform in the Soviet school. Horyz techn 16 no.2:10-11 '63.

1. Instytut Pedagogiczny, Krasnodar, (ZSRR).

CHUVATOV, V.V.; BEREZIN, N.N.; METSGER, E.Kh.; NAGIN, V.A.; KARTASHOV, N.A., kand. tekhn. nauk, dots.; MIL'KOV, N.V., kand. tekhn. nauk; BYCHKOV, M.I., kand. tekhn.nauk, dots.; SUKHANOV, V.P., SHLYAPIN, V.A.; KORZHENKO, L.I.; ABRAMYCHEV, Ye.P.; KAZANTSEV, I.I.; YARES'KO, V.F.; LUKOYANOV, Yu.N.; DUDAROV, V.K.; BALINSKIY, R.P.; KOROTKOVSKIY, A.E.; PONOMAREV, I.I.; NOVOSEL'SKIY, S.A., kand. tekhn.nauk, dots.; IL'INYKH, N.Z.; TSITKIN, N.A.; ROGOZHIN, G.I.; PRAVOTOROV, B.A.; ORLOV, V.D.; RACHINSKIY, M.N.; KULTYSHEV, V.N.; SMAGIN, G.N.; KUZNETSOV, V.D.; MACHERET, I.G.; SHEGAL, A.V.; GALASHOV, F.K.; ANTIPIN, A.A.; SHALAKHIN, K.S.; RASCHEKTAYEV, I.M.; TISHCHENKO, Ye.I.; FOTIYEV, A.F.; IPPOLITOV, M.F.; DOROSINSKIY, G.P.; ROZHKOV, Ye.P.; RYUMIN, N.T.; AYZENBERG, S.L.; GOLUBTSOV, N.I.; VUS-VONSOVICH, I.K., inzh., retsenzent; GOLOVKIN, A.M., inzh., retsenzent; GUSELETOV, A.I., inzh., retsenzent; KALUGIN, N.I., inzh., retsenzent; KRAMINSKIY, I.S., inzh., retsenzent; MAYLE, O.Ya., inzh., retsenzent; OZERSKIY, S.M., inzh., retsenzent; SKOBLO, Ya.A., dots., retsenzent; SPERANSKIY, B.A., kand. tekhn. nauk, retsenzent; SHALAMOV, K.Ye., inzh., retsenzent; VOYNICH, N.F., inzh., red.; GETLING, Yu., red.; CHERNIKHOV, Ya., tekhn. red.

[Construction handbook] Spravochnik stroitelia. Red.kollegiia: M.I. Bychkov i dr. Sverdlovsk, Sverdlovskoe knizhnoe izd-vo. Vol.1. 1962. 532 p. Vol.2. 1963. 462 p. (MIRA 16:5)
(Construction industry)

KALUGIN, N.M., polkovnik, voyennyy shturman pervogo klassa

From a short bombing run. Vest. Vozd. Fl. no.5:48-50 My '61.
(MIRA 14:8)
(Bombing, Aerial--Study and teaching)

KALUGIN, N.N.

ROZENTSVEYG, P.E., dotsent; KALUGIN, N.N., direktor.

Teaching the course on the technology of medicinal compounds in pharmaceutical institutes. Apt.delo no.4:41-44 Jl-Ag '53. (MLRA 6:8)

1. Opyt raboty kafedry tekhnologii lekarstvennykh form Molotovskogo farmatsevticheskogo instituta. (Pharmacy--Study and teaching)

CHEBUKOV, M.F.; KALUGIN, N.N.; P'YACHEVA, G.Ye.

Use of light ashes from electric power plants to replace clinker cements in factory production of concrete and reinforced concrete products. Trudy Ural. politekh. inst. no.118:70-84 '62. (MIRA 16:6)

(Ash(Technology)) (Precast concrete)

KALUGIN, N.V.; VORONKOV, M.G.

Waterproof soaking of cotton fabrics with silicon organic compounds. Zhur. prikl. khim. 31 no.9:1390-1397 S '58. (MIRA 11:10)
(Silicon organic compounds) (Cotton fabrics)
(Waterproofing of fabrics)

KALUGIN, N.V.

Wear and tear of tent cloth under various climatic conditions.
Izv. vys. ucheb. zav.; tekh. tekst. prom. no.3:19-25 '59.
(MIRA 12:11)
(Waterproofing of fabrics) (Duck (Textile)--Testing))

KALUGIN, N.V.

Photochemical destruction of fabrics and of protective impregnation substances. Izv.vys.ucheb.zav.; tekh.tekst.prom. no.4: 17-22 '59. (MIRA 12:11)
(Cotton fabrics--Preservation)

KALUGIN, N.V.

Extra heavy tent cloth. Tekst. prom. 19 no.6:35-38 Je '59.
(MIRA 12:9)

(Duck (Textile))

KALUGIN, N.V.

Combined impregnation of tent cloth. Tekst.prom. 19 .no.8:40-41 Ag '59. (MIRA 13:1)
(Duck (Textile) (Waterproofing of fabrics)

S/661/61/000/006/075/081
D287/D302

AUTHORS: Voronkov, M. G. and Kalugin, N. V.

TITLE: Imparting hydrophobic properties to cellulose materials by using organosilicon compounds

SOURCE: Khimiya i prakticheskoye primeneniye kremneorganicheskikh soyedineniy; trudy konferentsii, no. 6: Doklady, diskussii, resheniye. II Vses. konfer. po khimii i prakt. prim. kremneorg. soyed., Len. 1958. Leningrad, Izd-vo AN SSSR, 1961, 328-335

TEXT: This is a continuation of earlier investigations on treating textile fibers with organosilicon compounds (polyalkyl hydrosiloxanes, alkyl acyloxysilanes and polyalkyl siloxanols of some metals). The authors assume that the high stability of water-repellant organosilicon impregnating agents is due to the chemical interaction of the reactive functional groups in the utilized monomers and polymers of organosilicon compounds and the hydroxyl groups in cellu-

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S/661/61/000/006/075/081
D287/D302

Imparting hydrophobic properties ...

lose so that a C-O-Si bond is formed. This reaction can occur during thermal treatment of the fibers but also at room temperature (especially in the presence of a catalyst); in the latter case the reaction is much slower. This hypothesis was confirmed by experiments on model systems. A water-repellent, chemisorbed layer is formed on the cellulose fibers. The effect of the orientation of the hydrocarbon radicals of the organosilicon compounds, and of the hydrophilic hydroxyl groups of cellulose on the hydrophobic properties of this layer are discussed. Hydrophobing of materials, containing OH groups (including cellulose) by using polyalkyl hydrosiloxanes is stated to proceed effectively in the absence of oxygen or oxidising agents. Salts of Zn, Cd, Hg, Co and Ni (acetates or chlorides) are satisfactory catalysts. Organosilicon polymers which do not contain reactive functional groups and therefore cannot combine chemically with cellulose do not give stable water-repellant coatings on textile fibers. The reaction of organosilicon compounds with a reactive functional group X(X=H, OCOR, OR) with H_2O is discussed. Materials treated with trifunctional organosili-

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con monomers of the type $RSiX_3$ (but not polymers) acquire a high degree of stiffness, due to the formation of hard, non-elastic steric polymers. Bifunctional monomers do not induce this stiffness but also do not impart water-repellant properties. At present, mixtures of tri- and bifunctional monomers are used as hydrophobing agents. The authors have also found that organosilicon hydrophobing agents combine well with Cu-and Cr-salts, forming stable compounds which are retained for long periods on the textile materials. In the discussion the authors stated that ЄН-8 (YeN-8) was the hydrolysis product of ethyl dichlorosilane and dimethyl dichlorosilane. P. A. Simigin (TsNIKhBI, Moscow), G. D. Nessonova (Moskovskiy tekstil'nyy institut (Moscow Textile Institute)) and I. A. Zubkov (Moscow) discussed their observations on various hydrophobing agents. There are 2 figures, 1 table and 19 references: 13 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publications read as follows: F. Fortess, Ind. Eng. Chem., v. 46, (1954), 2325; H. A. Schuyter, J. W. Weaver and J. D. Reid, J. Am. Chem. Soc., v. 70, (1948), 1919; R. W. Kerr and K. C. Hobbs, Ind. Eng. Chem., v. 45, (1953), 2542.

KALUGIN, N.V.

Waterproofing of fabrics with organosilicon compounds. Tekst.prom. 20 no.3:58-61 Mr '60. (MIRA 14:5)
(Waterproofing of fabrics)
(Silicon organic compounds)

KALUGIN, M.V., kand.tekhn.nauk, dotsent

Photochemical degradation of weatherproofed textile fabrics.
Izv.vys.ucheb.zav.; tekh.leg.prom. no.2:73-78 '61. (MIRA 14:5)
(Textile fabrics)

KALUGIN, N.V.

Methodology for determining the defects caused by microorganisms in cotton fabrics during their utilization. Izv.vys.ucheb.zav.; tekh. tekst.prom. no.3:162-164 '65. (MIRA 18:8)

1. Voyennaya akademiya tyla i transporta.

KALUGIN, N.V.; YERMILOVA, I.A.

Method for the protection of textiles against microbiological destruction. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.4: 30-36 '65. (MIRA 18:9)

1. Voyennaya akademiya tyla i transporta.

KALUGIN, P. I.

15-57-5-6003

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, pp 43-44 (USSR)

AUTHOR: Kalugin, P. I.

TITLE: The Tectonic Plan of Kopet-Dag (K skheme tektoniki Kopet-Daga)

PERIODICAL: Izv. AN TurkmSSR, 1955, Nr 2, pp 17-20.

ABSTRACT: Kopet-Dag forms a part of the Turkmen-Khorasan arch, in which we differentiate three basic fold systems: 1) the southern--Dzhagatay; 2) the middle--Aladag-Binalud; and 3) the northern--Kopet-Dag, to which also belongs Malyy Balkhan. Only sedimentary layers of the Mesozoic and Cenozoic appear within the limits of Kopet-Dag (6000 m to 8000 m). They are divided into seven strata: 1) the sandstone-argillaceous of the Lower and Middle Jurassic; 2) the calcareous layer of Malm and of the Neocomian; 3) the sandstone argillaceous of the Aptian, Albian and Cenomanian; 4) the carbonate-argillaceous of the Upper Cretaceous; 5) the

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Inst. Geology AS Turkmen SSR

The Tectonic Plan of Kopet-Dag (Cont.)

sandy-argillaceous of the Paleogene; 6) facially variegated Neogenic series of brackish deposits (predominantly in the west and absent in the east), and molasse; 7) a post-Tertiary series of porous, fragmented rocks. Neritic facies predominate. The typical flysch is not developed here, although some horizons of the Cretaceous and Paleogene have a flysch-like appearance. Kopet-Dag is an alpine folded formation, but the main elements of its structure emerged already durirg the Mesozoic. At the end of the Cretaceous the central portions of Kopet-Dag finally rose above sea level and divided the geosyncline into western and eastern basins. In the Oligocene, there was formed in the western part of Kopet-Dag a thick deposit of Maykop clays, but in the eastern and the central parts considerable uplifts occurred at the time. Here the coarse Karagaydanskiye molasses were formed. At the beginning of the Miocene all the basic elements of the present structure of Kopet-Dag had taken shape. Strong folding movements, accompanied by large-scale faulting, occurred in the middle Pliocene and at its end. The great uplifts of the Quaternary resulted in the orographic edifice of present Kopet-Dag. The district is separated from the Kara-Kum

The Tectonic Plan of Kopet-Dag (Cont.)

platform by the depression of central Kara-Kum; the northern slope of the latter forms a marginal portion of the platform; at Ashkhabad it has a width of at least 120 km. Between its southern border and the foremost Kopet-Dat chain, which is tipped and thrust toward the northeast, there runs for almost 500 km a narrow (10 km to 20 km) and very deep piedmont depression. To the southwest from the foremost chain we distinguish: 1) the Archman-Nukhur folds; 2) the belt of small mountains of western Kopet-Dag; 3) the belt of the main anticlinorium of Kopet-Dag; 4) a considerable portion of the trans-Caspian lowlands formed of subsided Kopet-Dag folded belt. The main anticlinorium consists of six anticlinal chains, each of which is broken up into several (four to ten) large anticlines situated in echelon with respect to each other or running along a single axis. A combination of great anticlinal ranges extending parallel to one another for tens and even hundreds of kilometers, and of the synclines separating these ranges, along with corresponding smaller anticlinal ridges and synclinal valleys, constitute the most characteristic feature of the structure and landscape of Kopet-Dag. In the greatly uplifted ranges of central and eastern Kopet-Dag there have developed fan-shaped and box-shaped folds which are

The Tectonic Plan of Kopet-Dag (Cont.)

tipped and thrust toward the north and south, away from the central chain of the main anticlinorium. Farther to the west, in the region of younger formations (Upper Barremian and later) we encounter only gently sloping folds which were usually straight and unbroken. Among the faults we distinguish: a) longitudinal thrusts along the northern walls of the anticlinals of the forward ridge and along the walls of the anticlines of the main anticlinorium, and b) diagonal faults, most common in central Kopet-Dag. In the west and southwest the folds of Kopet-Dag sink abruptly under the young deposits of the trans-Caspian plain where, according to geophysical data, there exists a sharp bend in the structure toward the south-southwest and the south. It is probable that the buried structure of Kopet-Dag turns west farther on, paralleling El' brus Mountains, that it may join the subsided part of the Caucasus from the southeast. The zone of southeastern subsidence of Kopet-Dag must be regarded as the folds of Badkhyz, Karabil', and North Afganistan, forming an arc which bulges to the south must be regarded as the subsided southeastern zone of Kopet-Dag. Parapamiz is a continuation, not of Kopet-Dag, but of Binalud.

Card 4/4

D. A. T.

KALUGIN, P.I.; DMITRIYEV, A.V.

Upper Cretaceous in the Badkhyz highland. Trudy Inst. geol. AN Turk. SSR 4:362-415 '62. (MIRA 16:7)
(Badkhyz region--Geology, Stratigraphic)

SMIRNOV, L.N., glav. red.; KHANOV, S., red.; KALUGIN, P.I., red.; MASHRYKOV, K.K., red.; MAMEDOV, Kh.M., red.; [illegible]OPOV, G.I., red.; ROZYYEVA, T.R., red.; MAYOROVA, Yu.M., red.izd-va; IVONT'YEVA, G.A., tekhn. red.

[Problems of the geology of Turkmenia] Voprosy geologii Turkmenii. Ashkhabad, Izd-vo AN Turkmenskoi SSR, 1963. 146 p. (MIRA 16:10)

1. Akademiya nauk Turkmenskoy SSR, Ashkhabad. Institut geologii.
(Turkmenistan--Geology)

KALUGIN, P.I., akademik; DMITRIYEV, A.V.; KOZHEVNIKOVA, G.Ye.; ALIYEV, M.M., akademik, red.; MIROYEDOVA, A., red.

[Stratigraphy of Upper Cretaceous and Paleocene sediments in the Kopetdag and Badkhyz] Stratigrafiia verkhnemelovykh i paleotsenovykh otlozhenii Kopet-Daga i Badkhyza. Ashkhabad, Turkmenizdat, 1964. 342 p. (MIRA 18:3)

1. Akademiya nauk Turkmenskoy SSR (for Kalugin). 2. Akademiya nauk Azerbaydzhanskoy SSR (for Aliyev).

KAINGIN, P.I.

Prospects for finding oil and gas in the Kopetdag. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.5:69-87 '64.
(MIRA 17:12)

ROZYREVA, T., kand. geol.-miner. nauk, glav. red.; SMIRNOV, L.N. kand. geol.-miner. nauk, zam. glav. red.; MASHRYKOV, K., akademik, red.; KALUGIN, P.I., akademik, red.; SEMENOVICH, V.V., kand. geol.-miner. nauk, red.; GABRIELYANTS, G.A., geol.-miner. nauk, red.; SHCHETININA, Yu.M., red.

[Problems of the geology of Turkmenia; materials for the 22nd International Geological Congress] Voprosy geologii Turkmenii; materialy k XXII Mezhdunarodnomu geologicheskomu kongressu. Ashkhabad, Turkmenskoe izd-vo, 1965. 242 p. (MIRA 18:6)

1. Akademiya nauk Turkmenskoy SSR, Ashkhabad. Institut geologii. 2. AN Turkmenskoy SSR (for Mashrykov, Kalugin).

KALUGIN, P.P., kapitan meditsinskoy sluzhby

Late results of tonsillectomy in adults. Voen.-med. zhur. no. 1:71-72 Ja '66 (MIRA 19:2)

KALUGIN, S.F.

AUTHOR: Kalugin, S.F. 3-58-4-17/34

TITLE: We Continue the Discussion of the Students Physical Training (Prodolzhayem razgovor o fizicheskom vospitanii studentov)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, # 4, pp 57 - 59 (USSR)

ABSTRACT: Experience has shown the advantage of student recreation camps over the rest homes, and the number of these camps increases every year. During the 1957 summer vacation, 120 such camps were organized for 20,000 students. Quite a few camps were also operating during the winter vacation.

Leading personnel and social organizations of vuzes did everything to help out: the Omskiy mashinostroitel'nyy institut (Omsk Machine Construction Institute) built a dining room for 140 persons, a kitchen, living quarters, etc. for a camp.

The author mentions a great number of well-equipped camps built by the personnel of the respective vuzes, as well as other camps where both the equipment and shelter were poor.

A great obstacle in developing and organizing students camps is the lack of land and tents.

ASSOCIATION: Ministerstvo vysshego obrazovaniya SSSR (USSR Ministry of Higher Education)

AVAILABLE: Library of Congress

Card 1/1

KALUGIN, S.K., kandidat geologo-mineralogicheskikh nauk.

Method of determining reserves of interstitial water and karst interstitial water. Vest.AN Kazakh.SSR 11 no.7:82-89 Jl '54.
(Water, Underground) (MLRA 7:11)

KALUGIN, S.K., kandidat geologo-mineralogicheskikh nauk.

Types of cavities in rocks and their significance in the formation of underground water in the southwestern part of Central Kazakhstan. Vest. AN Kazakh. SSR 12 no.9:21-37 S '56. (MLRA 9:10)

(Kazakhstan--Water, Underground) (Kazakhstan--Rocks)

KALUGIN, S.K.

Underground waters in central [illegible]. Izv. Akad. Kaz. SSR. Ser. geol. no.4:84-95 '60. (MIRA 14:2)
(Kazakhstan--[illegible], Underground)

KALUGIN, S.K. [deceased]

Formation of underground waters in the southwestern part of Kazakhstan. Trudy Inst. geol. nauk AN Kazakh.SSR no.14: 170-184 '65. (MIRA 19:1)

KALUGIN, V.

Reducing manual operations in a machinery manufacturing plant. Sots. trud 6 no.8:101-105 Ag '61. (MIRA 14:8)

1. Direktor moskovskogo mashinostroitel'nogo zavoda imeni 1-go Maya.
(Moscow—Machinery industry)

KALUGIN, V.

On our state farm "Ross'". MTO no.10:34 O '59. (MIRA 13:2)

1.Predsedatel' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva sel'skogo khozyaystva sovkhoza "Ross'".
(Grodno Province--State farms)

Kalugin, V.A.

AUTHOR: Amstislavskiy, D.M. and Kalugin, V.A. (Zhdanov Coke Oven Works). 140

TITLE: Operation of recording amperometers on coke ovens. (Rabota regestriruyshchikh amperometrov na koksovykh pechakh.)

PERIODICAL: "Koks i Khimiya" (Coke and Chemistry), 1957, No. 2, pp. 30 - 33, (U.S.S.R.)

ABSTRACT: The use of recording amperometers on pushing machines can be used as an indicator of the pushing operation. This may be particularly valuable for batteries with worn refractories. The diagram of an installation used in the Zhdanov Works (Fig. 1) and examples of records obtained under different pushing conditions (Figs. 2 - 9) are given.

KALUGIN, V.A.; MIKHAYLOVSKIY, K.F.

Automatic control of a coke sorting process dependent on the amount of coke on the ramp. Prom. energ. 17 no.12:4-5 D '62. (MIRA 17:4)

POMOSOV, A.V.; KALUGIN, V.D.

Effect of the cathode material on the electrodeposition of powdered copper. Zhur. prikl. khim. 36 no.9:1969-1973 D '63. (MIRA 17:1)

1. Ural'skiy politekhnicheskiy institut.

KALUGIN, V. F.

KALUGIN, V. F. -- "THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE ROLLING PROCESS DRAG IN NONDRIVING SHAFTS." SUB 29 DEC 52, MOSCOW ORDER OF LABOR RED BANNER HIGHER TECHNICAL SCHOOL IMENI BAUMAN (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

6

KALUGIN, V.F.

136-6-20/26

AUTHOR: Kalugin, V.F., Candidate of Technical Sciences.

TITLE: On the Article "Rolling and Heat Treatment of Titanium" by N.P. Zhetvin and V.K. Belosevich. (Po povodu stat'i N.P. Zhetvina i V.K. Belosevicha "Prokatka i Termicheskaya Obrabotka Titana".)

PERIODICAL: Tsvetnyye Metally, 1957, No.6, pp. 78-80 (USSR)

ABSTRACT: The writer of this letter to the editor is supervisor of the rolling group for the VIAM organisation. He strongly criticises recommendations and omissions in an article by Zhetvin and Belosevich published in Tsvetnye Metally, No.1. On the part "Production of Sections", he maintains the authors' suggestions for surface cleaning and heat treatment are misleading and gives a table of results obtained at his organisation on the mechanical properties of titanium after rolling with and without subsequent vacuum treatment. The misleading nature of the part "Hot Rolling of Sheets" he attributes to the authors' ignorance of practical work carried out elsewhere. The writer goes on to cite experimental data which showed the satisfactory plasticity of technical titanium when cold-rolled with stretching. The authors' recommendations on heat-treatment he considers incomprehensible, and because of omission of

Card 1/2 analyses, incapable of application to titanium-aluminium

KALUGIN, V. F.; POPOV, B. N.; DMITRIYEV, A. A.;

"Development and Mastering of Methods for Rolling Sheets and Strips of Titanium and Its Alloys," Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy), Moscow, Izd-vo AN SSSR, 1958. p 152.

(Ministry of the Aircraft Industry of the USSR).

KALUGIN, V. F.

18(2) PHASE II - ABSTRACTS AB-1

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 209 p. 4,000 copies printed.

Resp. Ed.: N.V. Ageyev, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.S. Rakhmanikov; Tech. Ed.: A.A. Kiseleva.

INTRODUCTION: This book, of which a Phase I Exploitation (SOV/1200) has been prepared, is a collection of scientific papers devoted to the study of titanium and its alloys from three main points of view: physical metallurgy, forming, and welding. Special problems investigated include structural changes occurring during welding, determination of the content of harmful gases, development of industrial methods of rolling, and oxidation at various temperatures.

PART I. PHYSICAL METALLURGY

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Kalugin, V.F., B.N. Popov, and A.A. Dmitriyev (Ministry of the Aircraft Industry of the USSR) Development and Practical Application of Methods for Rolling Sheets and Strips of Titanium and Its Alloys 152

The aim of this investigation was to develop a method of rolling titanium and titanium-alloy sheets, produced by the "Elektrostal'" Plant. The method developed consists of the following steps: (1) Production of ingots of VT-1D and VT-5D alloys. (2) Turning the ingots on a lathe. (3) Drop-forging the ingots into billets 20-35 mm in thickness. Forging conditions for VT-1D alloy: heating the ingot to 950° (heat-up time: 40-60 minutes), with intermediate heating for 7-10 min; for VT-5D alloy: heating of ingot to 1050° (heat-up time: 40-50 minutes). (4) Planing of billets to a depth of 1-2 mm. (5) Hot rolling of billets into sheet 2.0 mm thick; rolling conditions for VT-1D: heating of billet to 950° (heat-up time: 20-25 minutes) without intermediate heating, reduction of 25-35 percent per pass; for VT-5D: heating of billet of 1000° (heat-up time: 20-25 minutes), intermediate heating for 1-2 minutes, reduction of 20-25 percent per pass. (6) Annealing of VT-1D sheets at 700-750°, holding for 10 minutes. (7) Immersion for 30 minutes in fused-alkali bath

(80 percent NaOH, 20 percent $NaNO_3$), washing, pickling in acid solution, and final washing. To produce strip, hot-rolled sheet 2.2 mm, in thickness is cut into strips 200 mm wide and annealed at 700° for ten minutes. After annealing, the strips are butt-welded together using an argon-shielded arc to form a coil. The strip is then cold-rolled in 10 passes on a four-high mill, with tension in one direction, to a final thickness of 0.6 mm with intermediate annealing at thicknesses of 1.55 mm, and 0.8 mm. There are 6 figures and 5 tables, no references.

Sokolikov, K.I., V.N. Moiseyev (Ministry of the Aircraft Industry of the USSR) Hot Rolling of Commercial Titanium and Several of Its Alloys 162

Results are presented of an investigation to determine a satisfactory procedure for the hot rolling of VT-1D commercial titanium and two of its alloys (VT-2D and VT-5D). Directions are given for the production and forging of ingots and the heat treatment of forged blanks for rolling. The authors summarize the results of the investigation as follows: (1) A determination was made of the basic mechanical and manufacturing properties of VT-1D commercial titanium and VT-2D and VT-5D titanium

KALUGIN, V.F.; POPOV, B.N.; DMITRIYEV, A.A.

Developing and mastering the sheet and strip rolling procedure for titanium and its alloys. Titan i ege splavy no. 1:152-161 '58.
(MIRA 14:5)

1. Ministerstvo aviatsionnoy promyshlennosti SSSR.
(Titanium) (Rolling (Metalwork))

KALUGIN, V.F.

Kalugin, V.F., V.K. Barziy, S.G. Glazunov, T.S. Kuzina, and B.N. Popov (State Committee on Aircraft Engineering, Council of Ministers of the USSR). Production of Large-Sized Cold-Rolled Sheet From Vt-1D Alloy, p. 133. Titan i yego splavy. vyp. II: Metallurgiya titana (Titanium and Its Alloys. No. 2: Metallurgy of Titanium) Moscow, Izd-vo AN SSSR, 1959. 179 p.

This collection of papers deals with sources of titanium; production of titanium dioxide, metallic titanium, and titanium sheet; slag composition; determination of titanium content in slags; and other related matters. The sources of titanium discussed are the complex sillimanite ores of the Kyakhtinskoye Deposit (Buryatskaya ASSR) and certain aluminum ores of Eastern Siberia. One paper explains the advantages of using ilmenite titanium slags for the production of titanium dioxide by the sulfuric acid method. Production of metallic titanium by thermal reduction processes (hydrogen, magnesium, and carbon reduction) is the subject of several papers, while other papers are concerned with the electrolytic production of titanium. Other subjects dealt with are interaction of titanium with water vapor and with hydrogen and the determination of titanium in slags.

KALUGIN, V.F.; BARZIY, V.K.; GLAZUNOV, S.G.; KUZINA, T.S.; POPOV, B.N.

Production of large-sized cold-rolled sheet from VT-1D alloys. Titan i ego splavy no.2:133-144 '59. (MIRA 13:6)

1. Gosudarstvennyy komitet Soveta Ministrov SSSR po aviatsionnoy tekhnike.
(Titanium alloys) (Rolling (Metalwork))

69830
S/136/60/000/05/011/025
E071/E235

18.5100

AUTHORS: Morozov, L. N., Kalugin, V. F., Kaganovich, I. N., Kushakevich, S. A., and Agarkov, V. F.

TITLE: Mastering the Technology of Rolling on a Merchant Mill of Rods from Titanium Alloys on a Metallurgical Works

PERIODICAL: Tsvetnyye metally, 1960, Nr 5, pp 57-61 (USSR)

ABSTRACT: The possibility of rolling rods from titanium and its alloys (OT4 and VT2-1) on a merchant mill and the quality of the products made were investigated. Chemical analyses of the ingots rolled are given in Table 1. Ingots of OT4 alloy were obtained by a vacuo-argon melting and those of VTZ-1 by a double vacuo melting. As semis for rolling forged squares 80 x 80 to 230 x 230 mm, 1100 to 1400 mm long were used. The rolling was done on a mill 600 with water cooling of bearings and rolls at a rolling velocity 2 to 2.7 m/sec (Table 2). Temperature of the beginning of rolling 1020 to 1070°C and that of the end of rolling 950 to 980°C. The main parameters of roll passes for rolling rods of 16 mm diameter are given in Table 3; mechanical properties of rolled and annealed products are given in Table 4; examples of the microstructure of rods are reproduced in Figs 1 to 3, a comparison of the

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69830

S/136/60/000/05/011/025
E071/E235

Mastering the Technology of Rolling on a Merchant Mill of Rods from Titanium Alloys on a Metallurgical Works

appearance of the surface of forged, pressed and rolled rods from VTZ-1 alloy is shown in Fig 4. It is concluded that rolling of titanium alloys is feasible. Under works' conditions, semis for rolling should be forged squares 230 x 230 mm 1100 to 1400 mm long. In order to obtain the best structure in finished products, rolling should be finished at a lower temperature, ie, below the range of the β phase. There are 4 figures and 4 tables.

Card 2/2

KABANOV, Yu. N.; KORNEYEV, N. I.; PEVZNER, S. B.; SKUGAREV, I. G.; KALUGIN, V. F.

Extra-strong pressed steel semifinished articles. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. no.10: 37-38 '62. (MIRA 15:10)

(Deep drawing(Metalwork))

KALUGIN, Viktor Filippovich; BARZIY, Vyacheslav Kupriyanovich; GLAZUNOV, Sergey Georgiyevich; KUZ[illegible]MA, Tamara Stepanovna; POPOV, Boris Nikolayevich; OGURTSOV, Aleksandr Ivanovich; OL'SHANSKAYA, I.V., inzh., ved. rdd.; PONOMAREV, V.A., tekhn. red.

[Technology of ingot forging and the continuous rolling of large-size, commercially pure, VT1D titanium sheet. Over-all mechanization of the loading and unloading of ingots from holding furnaces] Tekhnologiia kovki slitkov i nepreryvnoi prokatki krupnogabaritnogo lista iz tekhnicheski chistogo titana VT1D. Kompleksnaia mekhanizatsiia protsessov zagruzki i vygruzki zagotovok iz metodicheskoi pechi. [By] A.I. Ogurtsov. Moskva, Filial Vses.in-ta nauchn. i tekhn. informatsii, 1958. 17 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 5. No.M-58-22/3)
(MIRA 16:3)

(Titanium) (Rolling (Metalwork))
(Materials handling--Equipment and supplies)

L 12926-63 EWP(k)/EWP(q)/EWI(m)/EDS ASD/AFFTC Pf-4 JD/HW/JG/WB
ACCESSION NR: AP3001014 S/0193/63/000/004/0012/0015

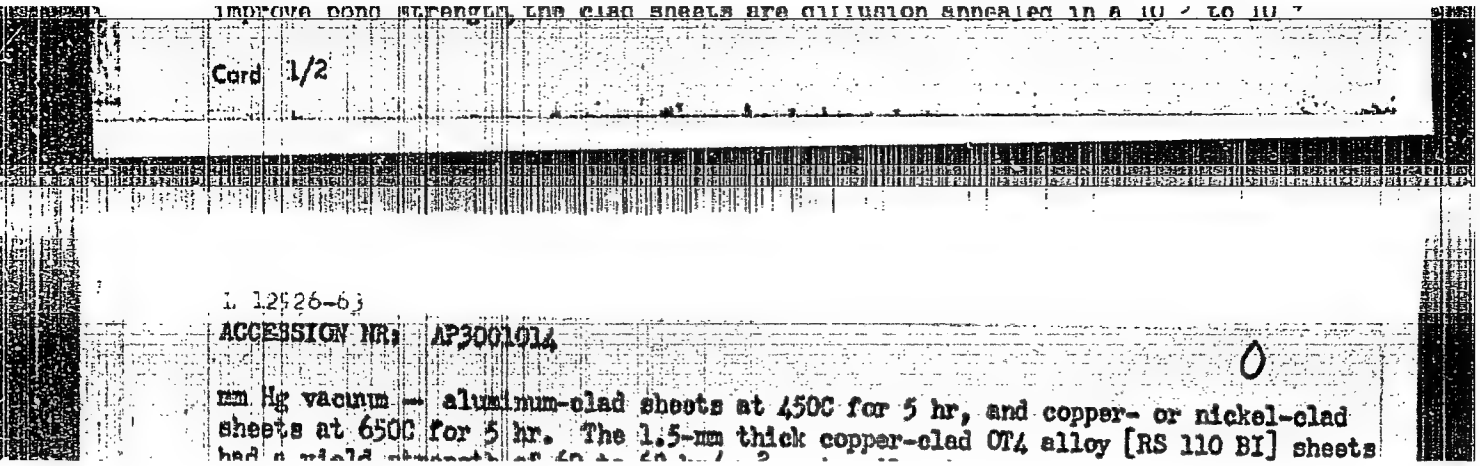
AUTHOR: Dmitriyev, A. A.; Kalugin, V. F.; Grigor'yeva, G. A.

TITLE: Rolling of bimetallic titanium-aluminum, titanium-copper, and titanium-nickel sheet

SOURCE: Byul' tekhniko-ekonomicheskoy informatsii, no. 4, 1963, 12-15

TOPIC TAGS: clad titanium-alloy sheet, copper cladding, nickel cladding, hot dipping, electrodeposition, diffusion annealing, titanium, titanium-alloy sheet, titanium alloy

ABSTRACT: Self-ignition of titanium and its alloys in gaseous or liquid oxygen can be effectively prevented by cladding with aluminum, copper, or nickel. Cladding



improve bond strength the clad sheets are diffusion annealed in a 10 ⁻² to 10 ⁻⁴

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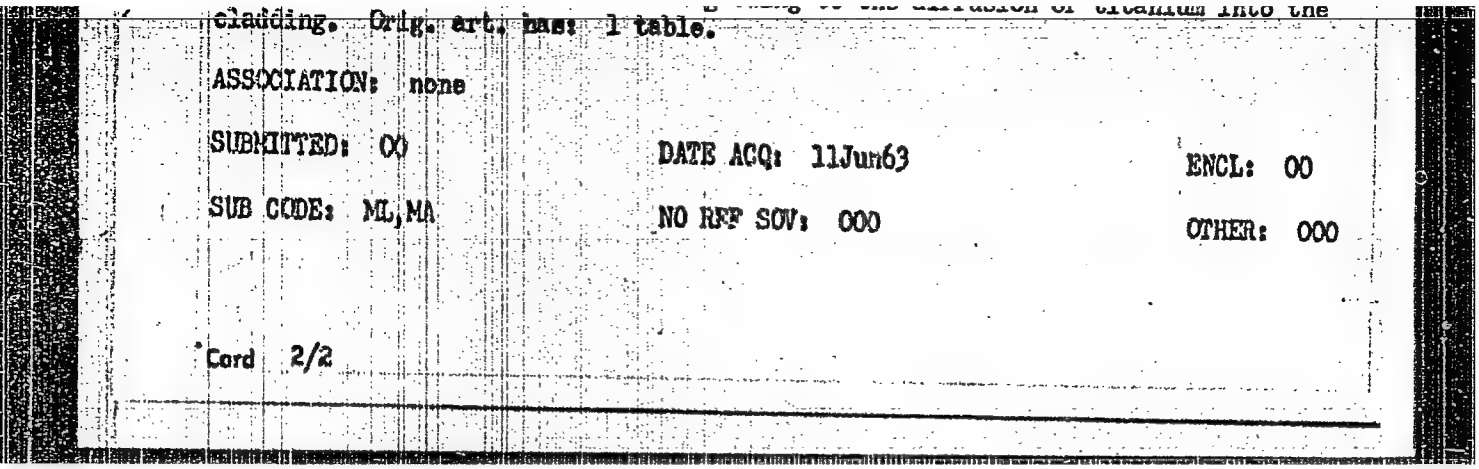
L 12526-63

ACCESSION NR: AP3001014

0

mm Hg vacuum — aluminum-clad sheets at 450C for 5 hr, and copper- or nickel-clad sheets at 650C for 5 hr. The 1.5-mm thick copper-clad OT4 alloy [RS 110 BI] sheets had a yield strength of 40 to 60 kg/



cladding. Orig. art. has: 1 table.

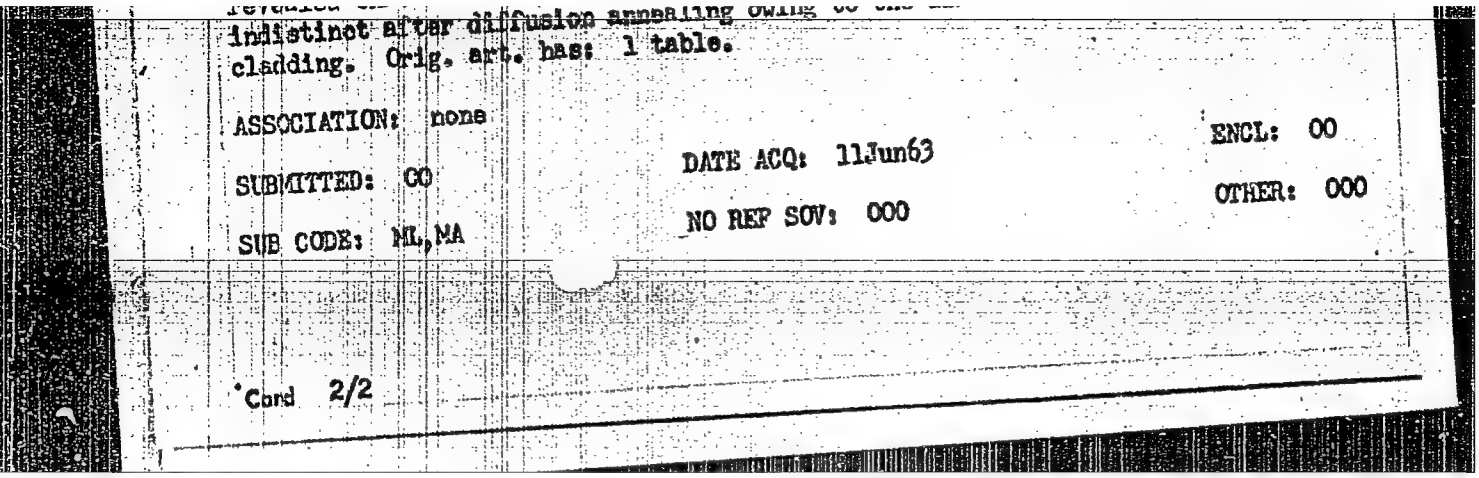
ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 11Jun63 ENCL: 00

SUB CODE: ML,MA NO REF SOV: 000 OTHER: 000

Card 2/2

mm Hg vacuum — aluminum-clad sheets at 450C for 5 hr, and copper- or nickel-clad sheets at 650C for 5 hr. The 1.5-mm thick copper-clad OT4 alloy [RS 110 BI] sheets had a yield strength of 60 to 68 kg/mm^2, a tensile strength of 70 to 81 kg/mm^2, and an elongation of 18 to 31%; corresponding figures for aluminum-clad OT4 alloy were 60 to 77 kg/mm^2, 72 to 80 kg/mm^2, and 18 to 22%, and for unclad OT4, 55 to 64 kg/mm^2, 70 to 90 kg/mm^2, and 15 to 40%. Microhardness tests showed that the cladding-titanium alloy interface is softer than the base metal and that vacuum [illegible] increases the ductility of the interface layer. Microscopic analysis [illegible] between the cladding and base metal becomes



indistinct after diffusion annealing owing to the
cladding. Orig. art. has: 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 11Jun63 ENCL: 00

SUB CODE: ML, MA NO REF SOV: 000 OTHER: 000

Card 2/2

ACCESSION NR: AP4012434 S/0129/64/000/002/0055/0058

AUTHOR: Kabanov, Yu. N.; Korneyev, N. I.; Kalugin, V. F.; Skugarev, I. G.; Pevzner, S. B.

TITLE: Technology of hot work hardening of steel during rolling and compression

SOURCE: Metalloved. i term. obrab. metallov, no. 2, 1964, 55-58

TOPIC TAGS: VL1steel, martensite steel, austenite steel, steel rolling, steel compression, steel strain hardening, steel work hardening

ABSTRACT: A technology for hot work hardening of steel during rolling and compression was developed using martensite class VL1 type steel for testing. The carbon content in the austenite has a vital bearing upon the process after work hardening had been attained. It was e stablished that work hardening is augmented with a carbon content up to 0.5%. Steel with a carbon content of 0.6% or more is subject to brittle fracture after hot work hardening.

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ACCESSION NR: AP4012434

The optimal carbon content in steel for hot work hardening is from 0.45 to 0.55% with best hot work hardening attained with one roll pass. It was found that it is impossible to get a 90% deformation with a single pass, but up to 87% reduction with a single pass with some small billets was obtained with rapid temperature rises from 550 to 700C at the point of deformation. The sharp increase of temperature causes a partial recrystallization with ensuing reduction in work hardening. The specific pressure also rises sharply at deformations above 80%. The austenite which is most stable at 450C and least stable at 650C is preferably deformed at temperature slightly above 450C to prevent small reductions in temperature which may cause the austenite to transform. It is important that during the hot work hardening the prescribed temperatures during rolling (500-600C) be maintained without sharp heating and cooling. The austenite rolled with several passes was found to be harder than that with only one pass. The two rolling sequences which are given for this process are very complex, especially if used in industrial conditions. Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 00 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 000 OTHER: 000

Card 2/2

BABAKOV, A.A., kand. tekhn. nauk; LOMAKIN, N.D., kand. tekhn. nauk; AKSENOV, B.N., inzh.; KALUGIN, V.F., inzh.

Review of F.A. Ksenzuk's, and N.A. Troshchenkov's book "Rolling and finishing of stainless steel strip." Stal' 23 [i.e. 24] no.4:348 Ap '64. (MIRA 17:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni I.P. Bardina.

L 22842-66 EWP(e)/EWT(m)/T/EWP(t)/EWP(k) JD/HW/DJ/WH

ACC NR: AP6011221 SOURCE CODE: UR/0413/66/000/006/0057/0057

INVENTOR: Bulanov, A. V.; Korneyev, N. I.; Skugarev, I. G.; Kalugin, V. F.

ORG: none

TITLE: Method of producing a lubricant for hot working of metals. Class 23, No. 179869

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 57

TOPIC TAGS: lubricant, metal hot working, metal lubrication, metal lubricant

ABSTRACT: This Author Certificate introduces a method of producing a lubricant for hot working of metals based on aluminoborosilicate glass. To improve the lubricant quality and prevent crack formation on the surface of metal parts, the aluminoborosilicate glass is impregnated with sulfite waste liquor, which is followed by drying and application of a metal powder such as copper or iron. [ND]

SUB CODE: 11, 13/ SUBM DATE: 30Nov64/ ATD PRESS: 4229

UDC: 621.892:621.7.016.2

Card 1/1

L 44005-66 EWT(m)/EWP(t)/T/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AP6029871 SOURCE CODE: UR/0413/66/000/015/0022/0022

INVENTOR: Voronov, F. D.; Filatov, A. D.; Gun, S. B.; Selivanov, N. M.; Nosov, V. D.; Savel'yev, G. V.; Goncharov, F. I.; Plotnikov, P. I.; Roshkov, S. A.; Kustobayev, G. G.; Polushkin, V. P.; Arkhipov, V. M.; Uziyenko, A. M.; Kolov, M. I.; Kozhevnikov, V. P.; Shapiro, B. S.; Kalugin, V. F.; Grudev, P. I.; Aksenov, B. N.; Khomyachkov, A. P.; Rudakov, Ye. A.; Kuzema, I. D.; Gomzhin, V. V.; Poydyshev, B. N.; Shternov, M. M.

58
B

ORG: none

TITLE: Method of making high-strength steel plates by pack rolling. Class 7, No. 184232

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 22

TOPIC TAGS: high strength steel, high strength steel plate, high strength steel sheet, steel plate rolling, steel sheet rolling

ABSTRACT: This Author Certificate introduces a method of pack rolling high-strength steel plates and sheets up to 10 mm thick and up to 3500 mm wide in a carbon steel envelope. The method includes cleaning, coating, making of the pack, heating, rolling and subsequent heat treatment. To ensure an accurate thickness of the plates

UDC: 621.771.23

Card 1/2

L 44005-66

ACC NR: AP6029871

or sheets regardless of their location in the pack, the thickness of the envelope must be at least 0.6 of the total initial thickness of the high-strength plates of the pack. [ND]

SUB CODE: 13/ SUBM DATE: 18Jun64/ ATD PRESS: 5070

Card 2/2 blg

ACC NR: AT7005723 (A) SOURCE CODE: UR/2563/66/000/267/0015/0021

AUTHOR: Lebedev, T. A.; Korneyev, N. I.; Marients, T. K.; Kalugin, V.F.; Krupin, V. G.; Kabanov, Yu. N.

ORG: none

TITLE: Technology of production and properties of high-strength steel strip

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy. no. 267, 1966, Avtomatizatsiy i tekhnologiya mashinostroyeniya (Automation and technology in the machinery industry), 15-21

TOPIC TAGS: stainless steel, high strength steel, ~~steel strip~~, ~~strip~~ metal rolling, ~~strip~~ mechanical property, ~~rolling technology~~/2Kh15N5AM3 steel

ABSTRACT: A technology for industrial production of high-strength steel strip has been developed. The technology utilizes the strain hardening of austenitic-martensitic type steels in thermomechanical treatment done with the use of rolling stands with multiple rollers of relatively small diameter and large supporting rollers. High-strength strip, 0.165 mm thick, was produced by rolling with an 80% reduction 2Kh15N5AM3 stainless steel containing (%): 0.24 C, 0.80 Si, 0.80 Mn, 14.50 Cr, 4.0 Ni, 2.8 Mo and 0.06 N_2. A partial transformation of austenite into martensite occurred in steel during

Card 1/2 UDC: none

ACC NR: AT7005723

rolling, while a reverse transformation occurred with tempering, probably because of nitrogen diffusion in the α-phase. A relatively low ($1.85 \cdot 10^4$ kg/mm^2) modulus of the normal elasticity can be explained by a high degree of strain hardening. A tensile strength of about 272, 280 and 290 kg/mm^2 was obtained with aging at -200, +100 and 395°C, respectively, at an almost constant elongation of 0.75% in the -200—+300°C range. Nontempered and tempered (regardless of the conditions) specimens had a 0.98—0.99 ratio of (0.2) yield strength to tensile strength. Transverse specimens had a slightly higher tensile strength than the longitudinal. The metal also had a low stress sensitivity factor of 1.07 and 1.17 for longitudinal and transverse specimens, respectively. The best strength characteristics were obtained with aging at 395°C. Subzero treatment to bring about the γ-α phase transformation was unsuccessful, probably because of the stabilization of austenite. The ductility (the elongation-to-hardness ratio) was constant for all aging conditions up to 450°C. The fatigue strength, determined on the basis of 10^6 cycles, was 90 kg/mm^2. [MS]
Orig. art. has: 6 figures.

SUB CODE: 11,13/ SUBM DATE: none/ ATD PRESS: 5117

Card2/2